

***Remarks***

Reconsideration of this Application is respectfully requested.

Claims 1-22 are pending in the application, with claims 1, 5, 12 and 18 being the independent claims.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Allowed subject matter***

Applicants acknowledge the allowance of claims 5-11 with appreciation.

***Rejections under 35 U.S.C. § 102***

**Claims 12 and 18**

On page 2 of the Office Action, the Examiner rejected claims 12 and 18 under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2001/00055311 A1 to Trachewsky *et al.* (hereinafter Trachewsky). For at least the reasons set forth below, Applicants respectfully traverse this rejection.

Trachewsky is directed to "[a] method of determining a collision between two or more transmitting stations at one of the transmitting stations" (see abstract of Trachewsky). Trachewsky teaches a method to detect collisions by estimating the error power in copies of the preamble. According to Trachewsky:

"[a] collision is declared if an estimate of error power in second and third copies of the preamble minus an estimate of error power in third and fourth copies of the preamble exceeds a first threshold, or a maximum value of the norm of each term of a source field error vector minus a greater of the estimate of the error power in the second and third copies of the cyclic preamble and the estimate of the error power in the third and fourth copies of the preamble exceeds a second threshold"

(see abstract of Trachewsky).

Trachewsky teaches a subcircuit that "estimates the required gain to maximize signal-to-noise ratio, given the power estimate, and the binary indication from carrier sense" (see page 34, lines 12 - 14 of Trachewsky). The subcircuit described by Trachewsky is directed towards maximizing the SNR. Trachewsky does not, however,

teach or suggest, among other features," to generate a SNR indication signal from the second intermediate signal and the data symbol sequence," as recited in independent claim 12. Reconsideration and withdrawal of the rejection is requested.

Trachewsky also fails to teach or suggest each and every limitation of independent claim 18.

As described above, Trachewsky teaches detection of collisions between two or more transmission stations at one of the transmission stations by estimating the power of cyclic preambles. Trachewsky however does not teach or suggest "classifying the received signal as a collision or a non-collision *based on the logical combination of the correlation metric, the measured signal power, and the SNR*," as recited in independent claim 18 (emphasis added). Reconsideration and withdrawal of the rejection is requested.

### ***Rejections under 35 U.S.C. § 103***

#### **Claims 1-3**

On page 5 of the Office Action, the Examiner rejected claims 1-3 under 35 U.S.C. § 103(a) as being unpatentable over Trachewsky in view of U.S. Patent No. 6,178,161 to Terry (hereinafter Terry). For at least the reasons set forth below, Applicant respectfully traverses this rejection.

The Examiner concedes that Trachewsky fails to teach "classifying the received signal as a collision when the SNR is less than a second threshold," as recited in claim 1 (see Office Action at pp. 5). The Examiner instead relies on Terry as providing the missing teaching. Terry also fails to provide the teaching missing from Trachewsky.

Terry is directed to a method for selecting transmission rates based on whether the data is buffered. Terry teaches the use of "a point to point protocol (Ethernet *Collision Avoidance* protocol) which implements *collision avoidance*" (column 6, lines 2 - 5 of Terry), (Emphasis added). Terry does not, however, teach or suggest *collision detection*, as recited in claim 1.

Terry teaches to use the SNR to determine one of many communication modes that might be used. Terry does not, however, teach or suggest to use SNR for detecting collisions. According to Terry:

"[a] control unit 40 determines the short-term SNR for the respective direction of transmission ..., and determines at block 91 whether this is less than a low margin or threshold for decreasing the communication mode"

(Terry at column 16, lines 4 - 8). This is not the same as "classifying the received signal as a collision when the SNR is less than a second threshold," as recited in independent claim 1. For at least these reasons, neither Trachewsky nor Terry, alone or in combination with one another, teach or suggest the features recited in claim 1. Reconsideration and withdrawal of the rejection is requested.

Claims 2 and 3 depend from claim 1 and are thus allowable for at least the reasons provided above with respect to claim 1, and further in view of their own respective features. Reconsideration and withdrawal of the rejection of claims 2 and 3 is requested.

#### **Claim 4**

On page 6 of the Office Action, the Examiner rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Trachewsky in view of Terry and further in view of European Patent Application 99600019.6 (publications number EP 1069554 A1) to

Frantzeskakis (hereinafter Frantzeskakis). For at least the reasons set forth below, Applicants respectfully traverse this rejection.

As described above, Trachewsky and Terry do not teach or suggest each and every feature of independent claim 1. Frantzeskakis does not supply the teachings missing from Trachewsky and Terry with respect to claim 1. Thus, claim 4, which depends from independent claim 1, is patentable over Trachewsky, Terry and Frantzeskakis for at least the reasons provided above with respect to claim 1, and further in view of its own features. Applicants therefore respectfully request that the Examiner reconsider and withdraw the rejection of claim 4.

#### **Claims 15 and 16**

On page 7 of the Office Action, the Examiner rejected claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Trachewsky in view of U.S. Patent No. 5,657,326 to Burns *et al.* (hereinafter Burns). For at least the reasons set forth below, Applicants respectfully traverse this rejection.

Claims 15 and 16 depend from claim 12 and are thus allowable for at least the reasons provided above with respect to claim 12, and further in view of their own respective features. Reconsideration and withdrawal of the rejection of claims 15 and 16 is requested.

#### **Claim 17**

On page 8 of the Office Action, the Examiner rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Trachewsky in view of Frantzeskakis. For the reasons set forth below, Applicant respectfully traverses this rejection.

Claim 17 depends from claim 12. As described above, Trachewsky does not teach or suggest each and every feature of independent claim 12. Frantzeskakis does not supply the teachings missing from Trachewsky with respect to claim 12. Thus, claim 17, is patentable over Trachewsky and Frantzeskakis for at least the reasons provided above with respect to claim 12, and further in view of its own features. Applicants therefore respectfully request that the Examiner reconsider and withdraw the rejection of claim 17.

***Objection to the Claims***

On page 10 of the Office Action, the Examiner objected to claims 13, 14 and 19 - 22 as being dependent upon rejected base claims. Claims 13 and 14 depend from independent claim 12. Claims 19-22 depend from independent claim 18. Claims 13, 14, and 19-22 are thus patentable for at least the reasons set forth above with respect to claims 12 and 18, respectively. Reconsideration and withdrawal of the rejections of claims 13, 14, and 19-22 is requested.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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